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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,148	05/03/2006	Minerva Yeung	42P21742	8839

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EXAMINER
OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/578,148	YEUNG ET AL.
Office Action Summary	Examiner	Art Unit	
	MICHAEL N. OPSASNICK	2626	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 November 2009</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-23</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 May 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　　1.☒ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 11/9/2009 has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heckerman

et al (6260011) in view of Naito (5740318).

        As per claim 1, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches a text-speech mapping method (abstract) comprising:

        obtaining silence segments for incoming speech data (as obtaining silence segments for

speech data – abstract, col. 11 lines 25-47); preprocessing incoming transcript data, wherein the

transcript data comprises a written document of the speech data (as processing input text files –

fig. 6, subblock 10 to 604); finding possible candidate sentence endpoints based on the silence

segments (as recognizing endpoints and time stamps - Fig. 6, subblock 406); selecting a best

match sentence endpoint based on a forced alignment score (as globally aligning the text – Fig.

6, subblock 607); setting a next sentence to begin immediately after the sentence endpoint (as

marking end of sentence using the silence information – col. 11 lines 25-37); and repeating the

finding, selecting and setting processes until all sentences for the incoming speech data are

mapped (and repeating until sound and text are synchronized and aligned – fig. 6, subblock

610,612, and fig. 11). Heckerman et al (6260011) does not explicitly teach the score for possible

candidate sentence endpoints, however, Naito (5740318) teaches best match scoring based on

candidate sentence endpoints (col. 3 lines 45-55). Therefore, it would have been obvious to one

of ordinary skill in the art to modify the scoring of Heckerman et al (6260011) with sentence

endpoint best matching as taught by Naito (5740318) because it would advantageously improve

upon the sentence recognition accuracy results (Naito (5740318),col. 2 lines 60-64).

As per claim 2, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches the method of claim 1, wherein the preprocessing incoming transcript data

comprises:

scanning the transcript data; separating the scanned transcript data into sentences; and

placing each word from the scanned transcript data into a dictionary, if the word is not already in

the dictionary (as scanning text into text files and stored in the text corpus -- Heckerman et al

(6260011) Fig. 6, subblock 10 and 604)

As per claim 3, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches the method of claim 2, wherein each word in the dictionary includes

information on the pronunciation and phoneme of the word (as containing phone information –

Heckerman et al (6260011)col. 9 lines 34-46, as well as pronunciation information - col. 9 lines

55-65 and context -- col. 10 lines 21-26).

As per claim 4, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches the method of claim 1, wherein the finding possible candidate sentence

endpoints based on the silence segments comprises: using a dictionary as a table to map words

and tri-phonemes for the transcript data (Heckerman et al (6260011)as stored acoustic data in the

form of subphonemes - col. 9 lines 35-55, wherein triphone are well known in the art);

generating an acoustic model for the speech data, wherein the acoustic model records acoustic

features of each tri-phoneme for words in the speech data (Heckerman et al (6260011)as

triphoneme – col. 9 lines 45-55, and col. 10 lines 44-48); and determining the similarity of the

transcript data features obtained from the dictionary with the acoustic model features using a

voice engine to find the possible candidate sentence endpoints (Heckerman et al (6260011)as

using time stamps to mark endpoints – col. 10 lines 55-62 and col. 11 lines 25-37).

As per claim 5, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches the method of claim 4, wherein the voice engine is a HMM (Hidden Markov

Model) voice engine (Heckerman et al (6260011)as HMM being one of the probability

calculations disclosed – col. 9 lines 23-33 -- HMM is a well known voice engine recognition

model).

As per claim 6, the combination of Heckerman et al (6260011) in view of Naito

(5740318) teaches the method of claim 1, wherein upon completion of mapping each sentence,

the method further comprises: obtaining silence segments for each mapped sentence, the method

further including determining word level mapping for each mapped sentence, wherein the word

level mapping comprises finding possible candidate word endpoints based on the silence

segments; selecting a best match word endpoint based on a forced alignment score; setting a

next word to begin immediately after, the word endpoint; and repeating the finding, selecting and

setting processes until all words for the for the mapped sentence are mapped (Heckerman et al

(6260011) as continual mapping of words including time stamps to recognize end of word, as

well as end of sentence, col. 10 line 47 – col. 11 line 37; col. 11 lines 50-65, col. 12 lines 53-65).

As per claim 7, the combination of Heckerman et al (6260011) in view of <u>Naito</u>

(5740318) teaches the method of claim 1, wherein voice activity detection is used to obtain

silence segments for incoming speech data (<u>Heckerman et al (6260011)</u>-as detecting silence –

col. 4 lines 13-15).

As per claim 8, the combination of Heckerman et al (6260011) in view of <u>Naito</u>

(5740318) teaches the method of claim 1, wherein a forced alignment process is used to find

possible candidate sentence endpoints based on the silence segments, wherein the forced

alignment process further includes selecting

the best match sentence endpoint based on the forced alignment score (<u>Heckerman et al</u>

<u>(6260011)</u> -as when using alignment, choosing the best score – col. 4 lines 50-65, col. 8 lines

25-45)..

Claims 9-23 are system, tool, apparatus, and article claims that perform method steps that

are similar in scope and content of claims 1-8 and therefore, are rejected under similar rationale

as presented above against method claim 1-8. Furthermore, as per claims 9-10, <u>Heckerman et al</u>

<u>(6260011)</u> teaches a front end receiver – fig. 6, subblock 20, fig. 3, subblock 312,316 as well as a

voice engine – fig. 3, subblock 312). As per claims 11-13, <u>Heckerman et al (6260011)</u> also

teaches a front end receiver –Fig. 3, subblock 3120, text preprocessor (Fig. 3, subblock 302),

voice activity (speech recognizer – fig. 3 subblock 312 in conjunction with silence recognition

col. 4 lines 13-20), and a forced alignment mechanism (Fig. 3, subblock 318). As per claims 14-

23, <u>Heckerman et al (6260011)</u> teaches text-speech mapping (Fig. 3, subblock 318) and machine

readable medium (Fig. 2, subblocks 122, 127,131).

Response to Arguments

5.   Applicant's arguments filed 11/9/2009 have been fully considered but are moot in view of

the new grounds of rejection.

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Michael Opsasnick, telephone number (571)272-7623,
who is available Tuesday-Thursday, 9am-4pm.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.
        Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael N. Opsasnick/
Primary Examiner, Art Unit 2626
12/17/09